# My Flight With Christine: Trapped Aloft

*by LtCol. Jesse G. Evans*

My schedules officer called the other day, asking if I could fill in on a show-the-flag mission to Pensacola to give "kiddy rides" to aspiring student naval aviators. Well, yes, I could (even though it would eat a two-day break between trips at my other job).

We took off on a dreary, foggy morning. The birds were literally walking. A group of them was hanging out on the runway, and the tower wasn't going to let anyone go. After a pointed negotiation, I was allowed to hover-taxi the length of the runway to clear the birds so a Navy C-9 and I could take off without worrying about eating fowl.

The Navy types would be following the centerline stripes and transitioning to instruments as soon as they broke ground. I hold a "special" instrument card, which

grants me the option of taking off in 0/0 conditions, a dubious operation in a helicopter and certainly not for the faint of heart.

At a mere 1,000 feet above the ground, we broke out into a blinding sunrise, framed by a flawless, blue sky. I cancelled IFR, because this was just too pretty to waste. What a sight—the fog lying soft and flat below us and bathed in gold. Our Cobra's shadow danced with us over the fog bank as I leveled right on top and enjoyed the sensation of speed.

The weather in Pensacola was forecast to be clear, and we had fuel to spare. The fog undercast would dissipate somewhere in south Alabama. Airliners glided overhead as we crossed their final-approach course into Atlanta, configuring for landing, then silently disappearing into the whipped cream a few miles off the left stub wing. They had to be doing automatic landings; the soup was too thick for anything else. There was no going back. We had to head south to get down.

Clearing the Atlanta terminal area, we climbed to 4,500 feet, then 6,500 feet and enjoyed a free ride on the wind VFR over the top. We were smokin', but the global-positioning system was acting up. It's kind of a Rube Goldberg operation. The fleet needed accurate navigation and came up with an interim fix while we waited for funding to catch up. This particular Cobra had not been through the upgrade yet. Our GPS rig was powered by the aircraft through our biological-chemical-suit blower circuit and is held by velcro to the glare-shield in the gunner's position. It usually does a good job but my copilot-gunner wasn't having any luck with it on aircraft power or batteries. It had worked fine in flight. Equipment and the inline fuses had appeared intact on preflight. I switched the TACAN from Dobbins to LaGrange, the nearest radio-navigation aid to our intended track, but the instrument needles did not swing around in response. Now the TACAN was acting up, too; we were in the bloody Bermuda triangle. Oh, well, we were clear of controlled airspace, squawking, talking, the engines were purring, and we were on a heading that would take us approximately on course. I had initialized the doppler unit with the ramp coordinates before departure and fed it the current date and zulu time. It's not as good as a GPS, but will keep you within a few miles. It's not good enough for an instrument approach or a rocket attack, but fine for what we needed on this day.

My copilot-gunner punched in

the coordinates of our destination, South Whiting Field, and we were on our way. I tuned in 750 AM on the ADF because it's the strongest station for hundreds of miles. Their mast is on top of Stone Mountain and would serve as a handy cross-check of our outbound course from Atlanta for a long time. The DME portion of the TACAN was jumping around but generally counted down as we approached LaGrange, another small verification of the doppler. A few minutes later, it joined the TACAN on the MIA list. My eyes were so close to the puzzle that I wasn't seeing the pieces falling into place.

I talked to Macon Radio to confirm that Dobbins had opened our flight plan. As expected, FSS didn't have a strip on us. The briefer and I carried on a short conversation that would have seemed cold to an earthperson, but included quite friendly aviation-speak. He got everything squared away and ensured that Whiting knew we were on the way. He also confirmed the forecast clear and a million at our destination.

We were carrying one wing tank. I usually leave any auxiliary fuel I don't need for the mission profile in those tanks as I can jettison them and enjoy an instant increase in performance. We didn't need any of it and I started the fuel transfer. If anything else went wrong, fuel was the last thing I wanted to worry about. We were over a sea of white with no precise fix. If we needed one, Atlanta Center would have to supply it with radar. The compass had required correction after takeoff, but was now tracking OK with the wet compass. Our avionics were telling me not to count on having radios.

When we lost lock on 750 AM, the ADF refused to respond to any urging to find another station. I turned it off. I told my partner I was going to spray paint "Christine" on this bird after Steven King's hot rod from hell. Maintenance was going to love us for writing up so many avionics gripes. With that pronouncement, the radar altimeter's off-flag popped up. It would press-to-test normal, but insisted on displaying an off-flag, nonetheless. I switched it off, hoping it would cool down and be revivable if needed. We were only a few rungs above your basic stick-and-rudder flying machine at this point.

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I don't know if the needle moved or if it had been down there for a while. Scanning instruments is not a conscious act after so many years. Pilots notice anything that moves out of the normal range. We detect malfunctions before any of the other warning systems are activated because of the shiver of a needle. This particular indicator belonged to the transmission-oil pressure.

In helicopters, everything depends on the transmission. If it stops working, the machine stops flying. The pressure was not out of the normal operating range, but simply nailed steady to the bottom of the arc. I'm sure it had been mid-range previously because I hadn't noticed it, and any extreme is notable. It said 40 psi, barely in limits. The oil temperature read normal, and there were no caution lights. What should we do? Divert and abort the mission for normal oil pressure? The white carpet was unbroken beneath us. We pressed on.

The doppler told me sanctuary was 20 minutes ahead when the undercast broke, revealing the flat expanse of south Alabama farmland. Minutes to go and the transmission temperature and pressure were holding steady within limits. I observed that we

would have to ensure it was properly serviced before flying the students.

Pensacola Approach identified us abeam Brewton and gave us a vector to the field. The doppler had wandered, and we corrected a few degrees east. We were required by the tasking order to shoot an instrument approach, which let us avoid traffic and keep from running afoul of the local course rules. The TH-57s swarm around south field like a bunch of angry bees.

Downwind for the radar approach to runway 32 passing 4,000 feet descending, the master-caution lights and caution-system warning tone blared. The transmission-oil pressure was descending faster than we were and settled near the bottom of the indicator. The transmission low-oil pressure and oil-cooler bypass lights came on.

South Whiting Field was 4,000 feet below and close abeam on the right. I eased the collective down to the flat-pitch stop and told approach, "We are declaring an emergency, loss of transmission-oil pressure. We're autorotating to South Field."

The controller sounded cool, and I sure hope I did.

"Roger, Reddog, switch tower, and good luck."

We switched to the tower's frequency, and I repeated our declaration. I told my copilot-gunner to lock his harness. That was the extent of our discussion of the emergency. This was covered in the brief, and I hoped we understood each other. The airspeed was indicating more than 160 knots, and "Christine" was coming down like a manhole cover.

A sweeping 200-degree turn to the right, then a shallow left turn put us on glide slope and in line with a taxiway at the approach end of runway 23. We glided in smoothly, decelerating across the field boundary, a very small increase of collective on nose over and a slide home.

Tower never missed a beat and had everyone out of our way in seconds with the cavalry on the way. The crash trucks were there before I could roll down the throttles. We were delighted they didn't get a workout; the transmission had held together. The mechanics from our sister unit in New Orleans pitched in without hesitation, providing ground-handling equipment and sweat. The Navy transient line bent over backward to help us secure a turn spot and hangar space, then tow Christine where our Marines could do surgery.

She was orange from the shoulders down with oil, and the transmission was bone dry. Oil was raining off the inside of the cowling when we propped the covers open, and the drippings off the length of the aircraft drew a rough shadow on the taxiway. A short, braided oil line that runs to the oil cooler had failed. It had been spraying in the compartment for some time and had let go abeam the field. Our maintenance officer wondered aloud if our avionics failures may have been caused by the many gallons of hot oil spreading through the airframe. It was indeed soaked inside and out from the failure point aft to the tip of the tail. There will be no corrosion problems there.

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We had briefed emergencies ad nauseum. The copilot-gunner was a new guy to our squadron, and we had never flown together before. Funny, it usually takes a while to develop an opinion of another pilot. He showed himself to be a solid thinker and a cool head throughout. He's good to go.

I guess my new anxiety dream will have to be autorotating down through fog with no radio altimeter and a screaming transmission, instead of my old tried-and-true walking to the pencil sharpener during high-school math and realizing I'm naked.

LtCol. Evans flies with HMLA-773